September, 2002

Southeast Maricopa / Northern Pinal County Area Transportation Study

DRAFT

WORKING PAPER TRANSPORTATION ISSUES

GILA-PINAL COUNTIES REGION V

MARICOPA ASSOCIATION of GOVERNMENTS

Southeast Maricopa / Northern Pinal County Area Transportation Study

Draft Working Paper Transportation Issues

prepared for

Maricopa Association of Governments
Central Arizona Association of Governments
Arizona Department of Transportation

prepared by

PB 100 YEARS PARSONS BRINCKERHOFF

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Working Paper: **Transportation Issues**

1. Background

The Southeast Maricopa/Northern Pinal County Area Transportation Study (SEMNPTS) is a project jointly sponsored by the Maricopa Association of Governments (MAG), the Central Arizona Association of Governments (CAAG), and the Arizona Department of Transportation (ADOT).

The purposes of this study are to document the transportation relationships between Maricopa and Pinal Counties, examine the long-range transportation needs of the study area, and identify realistic projects to address the area needs. Ultimately, the projects identified in the study will be evaluated in a regional context in the MAG Regional Transportation Plan (RTP) process. Pinal County projects will be used by CAAG and Pinal County in their long range planning. Recommendations affecting current or potential future state facilities will be considered by ADOT.

The Southeast Maricopa/Northern Pinal County Area Transportation Study is separated into three phases.

1. Review existing conditions and trends; document future travel demand and issues.
2. Identify and evaluate transportation improvement options.
3. Develop a list of future transportation needs for the study area.

In order to accomplish these three phases, the project includes a number of work tasks, which describe specific elements of work. During the course of the project, Working Papers will be prepared to document the results of certain work tasks. These working papers are in draft form, subject to review and comment. These working papers will form the basis of the final report.

The working papers to be produced and the task they are associated with are summarized below.

Task 3: Working Paper - Review of Other Studies

Task 4: Working Paper - Socio-economic Data

Task 5: Working Paper - Transportation Conditions

Task 6: Working Paper - Transportation Issues

Task 7: Working Paper - Transportation Options and Evaluation

Task 8: Working Paper - Transportation Recommendations

This document presents *Working Paper – Transportation Issues*.

2. Introduction

Based on the review of other related studies (Task 3), preliminary transportation data (Task 5), and interviews with study stakeholders (Task 2), a number of key transportation issues have been identified in the Southeast Maricopa/ Northern Pinal County area. Many of these issues are similar to those facing other rapidly developing urban areas.

The study area has significant transportation facilities and service including freeways, arterials, express and local bus, and rail lines, which must all be considered in any future assessment and planning of transportation improvements.

Because of the nature of urban development and the practice by most agencies to improve arterials only along their frontage as development occurs, many arterial streets do not have a continuous width. This is commonly known as 'scalloped streets' and can cause serious capacity constraints as well as safety concerns. Some agencies, like the City of Chandler, have instituted impact fees in order to build continuous sections of arterial streets.

Another concern is discontinuous development. In some cases new development is several miles from the existing developed area and the arterial streets between the two areas have not been improved. However, many new trips can occur on these unimproved sections, which can cause congestion issues.

One of the most significant issues for the study area is the rapid development in southeast Mesa, eastern Gilbert, Queen Creek, and Northern Pinal County. The uncertainty of the redevelopment of the General Motors (GM) property, the potential and planned expansion of Williams Gateway Airport, and the numerous new housing developments, especially in Pinal County raise a concern that the currently planned transportation system cannot accommodate this growth.

The need to identify and protect right of way for new facilities is also a major issue. It is particularly important to define new regional corridors so that additional planning can be completed to define specific alignments and integrate right of way requirements into the land use planning process.

This working paper describes the transportation issues, combining local and regional input to create a broad understanding of what will be needed to meet transportation goals in the area. This is a preliminary assessment of issues that will be refined after traffic model runs have been completed with the new socio-economic data and additional analysis performed.

2.1 Report Structure

The discussion of issues has been categorized – mainly by mode with references to other modes as appropriate to address key intermodal issues. The categories are:

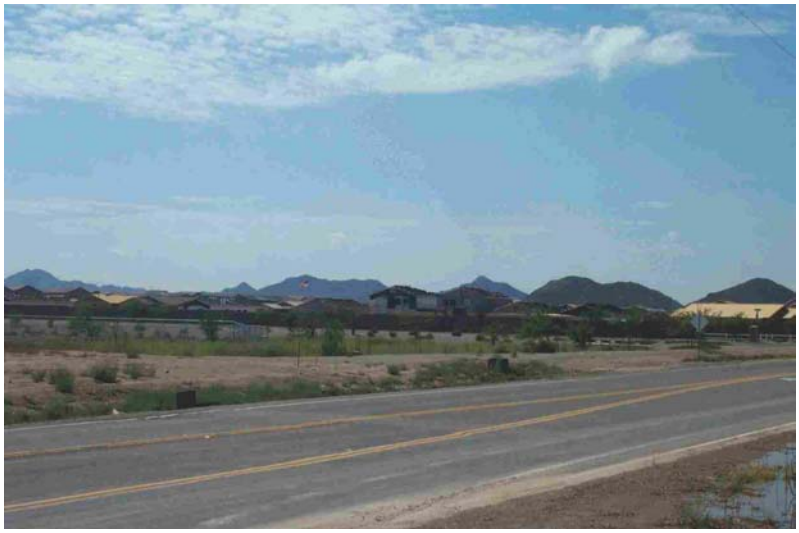
Arterial and State Highway
Freeway
Transit
Bicycle/Pedestrian
Airport Access

This is consistent with how project funding is allocated in the MAG region. However, the intent is not to segregate modes in the final plan, but to build from the comments received and information gathered toward a multimodal strategy for the Area Study and ultimately the Regional Transportation Plan. The report also identifies the timeframe within which the issue or improvement becomes critical to the long-term viability of the transportation system. In some cases, the report touches on issues not immediately discernible from present data or trends, but experience tells us that these issues must be considered.

3. Arterial and State Highway Issues

The primary emphasis in the development of the Southeast Maricopa / Northern Pinal County transportation system has been the arterial street and state highway network. The area is served by a grid system that connects activity centers with a hierarchy of roadways ranging from local streets in neighborhoods to limited access freeways for regional travel. There are exceptions to the grid system including Rittenhouse Road, Hunt Highway in Pinal County, and the state highway system.

One issue is the discontinuity and the irregularity of portions of the arterial grid. Section line roadways can be interrupted or limited by major developments (e.g., Sun Lakes, Williams Gateway Airport), physical features such as canals and major washes, or because development has yet to occur. The current process of requiring improvements as part of individual development approvals has led to varying roadway widths along a section of road. This study will address:



1) how to overcome or bypass discontinuities to benefit and not negatively impact adjacent neighborhoods, businesses or institutions; and 2) how to encourage a more uniform treatment across jurisdictional boundaries as well as from one development project to another. Currently, each agency assumes responsibility for its arterial grid system and occasionally the future planned number of lanes is not consistent across jurisdictional boundaries.

3.1 Expand the Arterial Street Grid / Improve State Highways

There is consensus throughout the study area that the arterial grid is the backbone of the road system and is essential to the future growth of the area. Much of the growth in the study area is occurring in the "focus area" of the study (see study area map) and there is considerable interest in identifying additional opportunities for roadway capacity to accommodate it. There is a need to widen existing arterial streets and to plan for those that currently do not exist, but will be needed to sustain growth. However, enhancing selected existing arterial streets to include grade separations at major intersections to provide higher capacity does not appear to be supported.

Topography, existing development such as Williams Gateway Airport, and planned development such as the General Motors Proving Grounds property and Johnson Ranch may prevent a uniform treatment of the arterials. In the absence of a complete grid system, shorter trips may be made on the regional freeway system, resulting in more congestion and inefficient overall system usage.

Some specific issues and needs for arterials and the state highways are listed below.

Complete the arterial street system as the General Motors Proving Grounds property develops.

Existing arterials at the Maricopa/Pinal County line need to be extended east and south.

Widen Arizona Avenue (SR 587) north to Hunt Highway from I-10.

Future of Rittenhouse Road.

Ellsworth Road realignment proposed near Pecos Road.

Access to State Trust land needs to be considered.

Extension of SR 88 to the south.

SR 79 needs to be widened.

Need US 60 bypass in Gold Canyon area.

Need an additional crossing of the CAP in Apache Junction.

Widen and extend Attaway Road.

Future cross section of Ganzel Road (Vineyard) (six lanes).

3.2 Scalloped Streets

As communities grow and development occurs, roadways begin to meet. Although the locations may match, oftentimes their design does not. A 4-lane roadway traveling from one community or development may narrow to a 2-lane roadway as it enters another community, a different development, or county island.

4. Freeway Issues

4.1 Identify Future Corridors

As development activity continues to move outward, there is interest in defining future freeway corridors and, especially, in protecting the right-of-way for future facilities. The corridors that have been identified as potential new regional facilities include:

Connection from I-10 in the Casa Grande area north to the East Valley (Apache Junction area).

Freeway facility from Loop 202 at Hawes Road in Mesa, connecting to Williams Gateway Airport and extending east to US 60.

Highway-type facility from US 60 in the Apache Junction area, around Queen Creek and extending west to I-10.

4.2 Add and Improve Freeway Interchanges at Key Locations

New or improved interchanges have been identified through stakeholder interviews and technical analysis to date at locations where economic activity has grown and begun to overload existing interchanges or impact adjacent streets. These interchanges include:

A half-diamond interchange is needed at Meridian Road on US 60 for traffic traveling to/from the west. This would provide access to downtown Apache Junction.

A half-diamond interchange is needed at Lindsey Road on US 60 for traffic traveling to/from the west. ADOT notes that currently funding is not available for new interchanges through their funding sources.

An interchange has been included on the Santan Freeway at Hawes Road. This interchange should eventually be a freeway-to-freeway type. A freeway would extend from this location at the northeast corner of Williams Gateway to the east into Pinal County. The facility may be phased in as development occurs.

New interchanges on I-10 in Casa Grande area.

4.3 Widening Existing Freeways

Based on future traffic volumes as forecast by MAG and CAAG, freeways in the Southeast Maricopa and Northern Pinal County areas will likely require expansion to accommodate the traffic expected in the area.

Widen the Superstition Freeway (US 60) in Pinal County.
Widen Loop 202.
Widen Loop 101.
Add HOV lanes on Loop 101 and Loop 202.
Widen I-10 between Casa Grande and the Maricopa County area.

5. Transit Issues

Transit service levels are relatively low in the Southeast Maricopa/Northern Pinal County study area. Cities have recognized the need for alternatives to the automobile as they grow but, at this time, only the City of Mesa has a dedicated source of revenue for transit, using a portion of its Quality of Life tax. A key issue in the study area is funding for transit, as well as management and operation of transit services.

Within the study area, developing and maintaining adequate roadways is a high priority. However, as the communities in the area have grown, identifying and developing alternative transportation modes has become an issue of increasing concern. Many community General Plans identify current or projected transit needs and multimodal opportunities. Some of the key questions to be addressed are:

What is the range of transit services required for the area?
Are additional passenger amenities such as transit centers, shelters, park and ride lots required?
Are intermodal connections needed?
What level of rural transit service is appropriate?
Does development encourage the use of transit service?
Are the needs of the low income and elderly being met?

The most common challenge identified among the area's communities regarding transit development is funding. Some cities are very small and do not have the critical mass to support a local tax or other revenue source. Others do not yet have an urgent need for alternatives to the automobile. On the other hand, even the smaller communities have recognized the limitations of relying on the highway system alone to handle travel demand in the future, and some (e.g., Coolidge) have worked hard to provide local transit/paratransit services.

5.1 Bus Service

Specific needs that have been identified include:

As areas in Pinal County fill in, they will need to be tied into metro transit system.
Vanpools for employers in both Maricopa and Pinal County should be pursued.
Commuter service from Casa Grande to various points in the East Valley via intercity bus.
Local transit service between Pinal County communities.
Basic grid bus system needs to be upgraded and expanded in the Maricopa County area.
Dial-a-ride and other para-transit service needs to be expanded and coordinated in the Maricopa County area.
Express bus and park and ride lot for commuters throughout the study area.

5.2 High Capacity Transit Service

The study of high capacity transit is currently underway by MAG to identify where such service might offer the potential of improved mobility in the region. Commuter rail is of interest in many of the communities that abut the Union Pacific Railroad right-of-way and it is a corridor that is being evaluated in the study. Even outlying communities view commuter rail as an opportunity for their residents to access downtown destinations in the more urbanized areas of the Valley. Chandler is currently conducting a major investment study to identify high capacity transit options – which could include light rail,

express bus, bus rapid transit, or commuter rail. The study is scheduled for completion by the end of 2002.

The City of Mesa is currently participating in the Valley Connections light rail project. Light rail will extend approximately one mile into Mesa, along Main Street from the Tempe border to Longmore. This project is expected to be complete by 2006. Mesa also plans to extend light rail into its downtown to Mesa Drive, although the route through downtown has not yet been determined. Other communities (e.g., Chandler) are also considering the possibilities of light rail. The MAG LRTP shows a potential LRT corridor along I-10 and Arizona Avenue/Mesa Drive.

5.3 HOV Lanes on Freeways

There is consensus that high occupancy vehicle (HOV) lanes need to be added and continued on the current freeway system and be provided for in any new freeways. Freeway to freeway connections of HOV lanes will also be needed. ADOT has recently completed a study addressing regional needs for HOV and high occupancy toll (HOT) lanes.

6. Bicycle/Pedestrian Issues

Bicycling and walking can be a solution to certain transportation problems. Family and personal business are the most common reasons for traveling, which includes shopping and other types of errands. Also, national surveys show that approximately 40 percent of all trips are less than 2 miles in length. This distance can be easily traveled on a bicycle in 10 minutes or walked in approximately 30 minutes. Most cities now incorporate bicycle facilities in their street cross sections.

6.1 Recreation Corridors

The Maricopa County's Trail Commission has been working to form a regional trail system. The goals of the program are to connect the County park system, link recreational corridors around the Valley, and help preserve open space in the community. This is an example of how a coordinated plan can support alternative modes of travel as part of a regional recreational / transportation element. The key to their contribution is in their implementation. Once they are in place, they can serve multiple uses. It also takes a number of communities to agree on the treatment within their areas to raise and maintain support for the project.

Locally, the Town of Florence has designated a system of trails and paths in its General Plan; Pinal County has built 13 miles of the Arizona Trail and a portion of the Superstition

Trail in conjunction with Apache Junction, and bike and equestrian trails are included in Queen Creek's General Plan. The City of Mesa has identified a system of bike routes, lanes and shared use paths in its recently completed Transportation Plan.

6.2 Bicycle/Pedestrian

Most circulation elements of the municipal general plans in the study area show bicycle lanes on both arterial and collector streets. Some of the bicycle/pedestrian issues that have been identified include:

Inclusion of bicycle lanes on new arterial and collector roadway cross-sections.
Design practices to minimize barriers to bicycle travel from grade separations, bridges, canals or other obstructions.
Availability of bicycle parking facilities.
Well-lighted sidewalks present along travel routes.
Coordination to ensure that bicycle and pedestrian facilities connect across city boundaries.
Multi-use pathways that connect street system bikeways and sidewalks with transit networks to provide linkages between trips origins and destinations.

7. Airport Access Issues

7.1 Williams Gateway Airport

Williams Gateway Airport, a partnership of the City of Mesa, Town of Gilbert, Town of Queen Creek, and the Gila River Indian Community, has significant potential for future impact on the area's transportation systems. The passenger terminal is currently on the west side of the airport, but will be relocated to the east side in the future. Access will be from the Loop 202/Hawes Road Interchange and Ray Road.

The City of Mesa has included a new regional facility to serve the airport from the east in their Transportation Plan. Additional transportation infrastructure around the airport will encourage industrial development.